The Wild Turkey in Pennsylvania

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THE WILD TURKEY is an all-American bird. In fact, he was originally confined to North America. He is so American that Ben Franklin proposed him for the national emblem. This proposal had considerable merit, as the turkey is big (our largest gallinaceous bird), iridescently handsome, and has much going for him in the way of wits and wariness. Fortunately for the turkey hunter, the eagle was picked. Had Franklin had his way, public sentiment would be opposed to hunting this greatest of all game bird trophies. Without sportsman interest and help, perhaps the turkey would have gone the way of the eagle and now be nearing extinction.

Turkeys were originally found from northeastern Mexico to southern Ontario and Maine. In the United States only the northern plains, the Northwest and the Pacific Coast were without turkeys. Because of the variety of habitats, ranging from Mexican arid scrub to dense eastern forests, six subspecies or varieties of turkeys evolved. External differences are minor color variations, with turkeys inhabiting arid western climes having lighter colored plumage. However, the internal physiological differences between subspecies are so great that generally one type cannot survive in another's habitat. Outstanding examples of the results of this difference are the abortive attempts to establish the Rio Grande turkey from semi-arid western Texas to the more humid piney woods of eastern Texas. Transplants of eastern turkeys from similar climes and habitat of nearby states were successful.

Shrinkage of Range

The turkey probably suffered more than any other native game bird in the

Virginia Game Comm. Photo

THE ADVANCE of civilization cut down the wild turkey's range greatly.

aftermath of frontier civilization's advance across America. His large size and good table qualities were worth expending shot and powder on, and his home, the forest, conflicted with man's agrarian interests. Turkey habitat was decimated to one-tenth its original size and its numbers even lower. They were extirpated from their toehold in southern Canada and from nearly half of the 39 states in their original range, and appeared doomed to the same fate in others.

The early 1900s were the darkest years in turkey history, but through a general public awakening of conservation needs and the saving of this magnificent game bird in particular, wise management finally reversed this trend. Today, turkeys have been restored to all but a few of their original states, and have been successfully established in several western states beyond the limits of historical range.

The nationwide turkey population has more than doubled in the past ten years, and now is estimated at over one million birds. This is a significant achievement which every sportsman and conservationist can regard with pride.

Original Range and Its Decline in Pennsylvania

Pennsylvanians can be especially proud of their part in turkey restoration, not only because they were the leader in this field, but also because of the obstacles surmounted. Turkeys were reduced to such low numbers that only diligent protection could save those that were left. Also, it is amazing that these birds could be restored to such high numbers in a state with a dense human population, where the best turkey range was already claimed by industry or agriculture. Much of the remaining range was of such poor quality that few turkeys were found there even in pioneer times.

Originally, all of Pennsylvania was within the northern limits of turkey range, a line extending west from southern Maine to the Niagara and across southern Ontario to South Dakota. Though turkeys ranged throughout Pennsylvania, their relative abundance under the virgin forest conditions of colonial times was not well documented. From available accounts and landmarks named after turkeys, we can assume they were found in much greater abundance in the southern half of the state, particularly in the hardwood forests of the southeastern section. In fact, the absence of turkey reports in the historical records and legends of some northern tier counties suggests they were absent or relatively rare there.

The senior author's grandparents resided in the heart of this northern forest belt in the 1890s, when extensive exploitation of the virgin forests in that area was just beginning. Neither they nor their predecessors knew of any turkeys in this region. Similar reports have been given by other persons whose ancestors were pioneer settlers in our northern counties.

Paradoxically, today turkeys are most abundant in areas where they

were originally rare, and rare where they were abundant. The latter is easily understood because the good soils of southeast Pennsylvania were claimed by agriculture, but the former is not so apparent. The only logical reason that this poor original range is now supporting so many turkeys is the radically different forest composition that has occurred since logging. These northern tier counties lie within the northern hardwood forest belt which was originally forested primarily with white pine and hemlock—hence the name Black Forest area of Pennsylvania. Logging of these conifers, followed by fires and excessive deer browsing, eliminated pine and hemlock regeneration and allowed formerly suppressed beech, birch, maple and other northern hardwoods to become dominant. Oddly enough, our turkeys today utilize and actually seem to require some conifer stands as cover, particularly in their winter range, but apparently a predominant coniferous forest is not hospitable to the eastern wild turkey.

The destruction of forest habitat by the ax has often been credited with as great a role in the decimation of our turkey flocks as overhunting by early settlers. This may be true generally, but the foregoing suggests the present abundance of turkeys in north-central Pennsylvania was dependent upon this misuse of the ax. Perhaps there was also a good side to the destructive timbering practices during the era of lumber barons, which greatly altered the forest composition to the benefit of turkeys.

Saving of Pennsylvania's Dwindling Turkey Flocks

Toward the middle of the 19th Century, turkey populations had dwindled in southeastern Pennsylvania and were beginning to suffer elsewhere in the state from civilization. Public concern resulted in local legislation to establish turkey seasons and ban molestation of nests and the use of traps, snares, blinds and baiting.

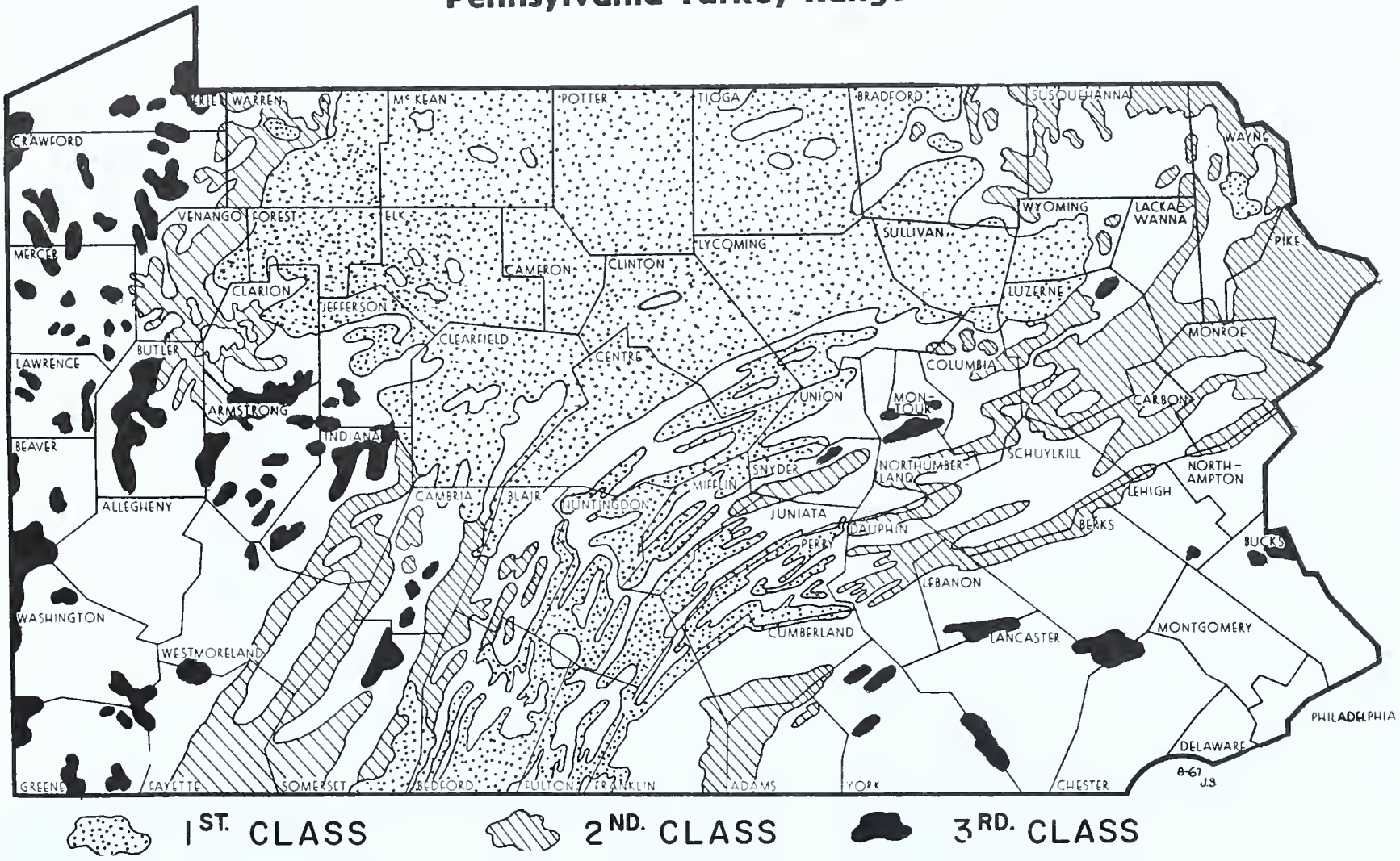
The first statewide law relating to turkeys, passed in 1873, provided for a closed season from January 1 to October 1. This might be considered the birthdate of wild turkey management in Pennsylvania. The $25 penalty, very severe at that time, for each illegally killed turkey has not been changed to this day, despite inflation.

The first daily bag limit (2 per day) was set in 1887, and 1905 legislation also set a season limit. In 1915 the bag limit was set at 1 bird per day, 1 per week, and 2 per season. The season limit was reduced to one turkey in 1917 and has remained in effect to the present. The 1923 Game Code set the open season for the month of November and shooting hours between sunrise and sunset. The turkey call was outlawed until 1937.

PENNSYLVANIA'S TURKEYS are most abundant today in areas where they originally were rare, and rare where they were formerly abundant.

Photo by Herbert Zimmerman

Pennsylvania Turkey Range



More drastic measures to save breeding stock from overshooting and permit turkeys to increase were the statewide closure of turkey hunting during 1913 and 1914, and again in 1926. Increased harvests in each year immediately following showed the benefits to the turkey population. There have been no statewide closures since then, but individual counties were closed to hunting from 1929-1953. The season was opened statewide from 1954 to 1958, some counties closed in 1959, then opened statewide again since 1960, with a longer hunting period permitted in primary north-central turkey range than in the remainder of the state. The manipulation of hunting seasons, lenient when and where turkey populations are high and restricted in critical areas, has been a management technique employed through the years by the Game Commission with good results to the welfare of our turkey population.

Refuges were also established in wild turkey range beginning in 1905, until there were over 100 in Pennsylvania. Seventy-three were established in 1935 and 1936 following a 1934 study of the turkey situation which indicated a need for greater protection for native breeding stock, as well as safe retreats for game-farm birds when liberated for breeding purposes. These refuges ranged in size from a few hundred to 3000 acres.

Changes in Range and Population Status

Game laws and refuges to save the turkey from extinction would have been meaningless without their enforcement. This was stringently provided by a dedicated group of Game Protectors and Refuge Keepers. This force was steadily increased to guard the turkey through its most critical years in Pennsylvania. The importance of our hunters and the public in general in the cause of saving this big game bird should not be slighted. Without this cooperation and support, success would have been impossible, even with the best law enforcement.

Public support for the Game Commission's law enforcement program, saved the turkey in sufficient numbers to permit hunting in the rugged mountain country of southcentral Pennsylvania. However, there was no significant change in numbers or expansion of range until other management measures were put into operation by the Game Commission. Only about 3000 square miles of our 23,000 square miles of forested land were occupied turkey range and annual harvest averaged 3000 to 4000 turkeys.

It was not until the late 1940s and 1950s that populations and range expanded from the oak type forests of the southcentral into the vast transitional and northern hardwood forests of northcentral Pennsylvania. This increase was attributed mostly to the stocking of large numbers of game farm-raised turkeys. Unquestionably, natural movements of native turkeys from the southcentral across the unbroken forests of northcentral Pennsylvania also played a significant part in establishing turkeys in these forests that had finally matured from the vast brushlands created by logging and subsequent fires.

Ironically, failures of game farm stock to establish turkeys in this forest while still in a young pole stage of development had led many persons to believe the northern forests were completely unacceptable to turkeys. Oak-chestnut forests seemed synonymous with turkey range, but the turkey has since proved more adaptable than we thought. Today we have some of our finest turkey populations where oak is rare or absent.

The success in establishing turkeys in unoccupied range in the late 1940s and early 1950s, which increased our annual harvest and occupied range in the state four or five fold, was not without some adversity. While turkey range and populations increased northward, populations decreased in the original southcentral range. Also, populations declined somewhat on the

Photo by Leonard Lee Rue, III

FOUR-FIFTHS of Pennsylvania's 25,000 square miles of forest land is capable of turkey management.

newly occupied northern range after their initial spurt of abundance — a natural phenomenon which usually occurs shortly after a species is successfully established in new range.

Since then there have been less spectacular but nevertheless steady increases in our turkey range and populations, particularly in our south-central area. Occupied range has also been extended on its northern periphery, except for some local restrictions where releases of game farm stock, at first successful, later failed.

Present Turkey Range

Pennsylvania's range is periodically surveyed to determine the turkey's current status. The last survey, completed in 1966, showed that 20,000 of the present total of 25,000 square miles of forest land in Pennsylvania are capable of some type of turkey management. This represents some 45% of the total state land area. Of this range, 1500 square miles, composed of pockets of forested land in counties with high human population, is considered inadequate to sustain huntable turkey populations without annual releases of game farm stock. This leaves approximately 18,500 square miles capable of maintaining self-perpetuating turkey flocks. Nearly 13,000 square miles (70%) are already holding good self-sustaining turkey populations. Most of the remaining forest land also has this potential, but establishment attempts with game farm turkeys have thus far been unsuccessful.

The bulk of the occupied range is in the northcentral part of the state, bracketed by the Allegheny River on the west and the North Branch of the Susquehanna on the east. The south-central range is bordered by the Susquehanna River and Cumberland Valley on the east and the Allegheny Mountain or Front on the west. This gives the occupied range map a mushroom shape with the stem in the south-central counties slanted to the right.

Significant is the fact that this occupied range is nearly continuous forested land across the state where turkeys can move rather freely from section to section without any natural or man-made barriers. Even rather narrow rivers, such as the Allegheny and West Branch of the Susquehanna, appeared to retard natural range expansion of wild flocks for a few years. Equally significant, there have been very few successful establishments despite repeated stocking of game farm turkeys in units of range isolated from the main range.

The only sections of the state without appreciable turkey range are the southeast section south of Blue Mountain, the western border counties and suburban Pittsburgh counties. Only five counties, all in the Pittsburgh and Philadelphia metropolitan areas, are considered completely void of turkey range potential.

Occupied Turkey Range

All of our northcentral counties are occupied by turkeys, usually with high populations. These are McKean, Elk, Cameron, Clearfield, Centre, Potter, Clinton, Tioga, Lycoming and Union Counties. Adjoining sections of northwestern and northeastern Pennsylvania with similar turkey densities are Forest, southeast Warren, east central

Venango, northeast Clarion, northern Jefferson, Sullivan, southwest Bradford and Wyoming, northeast Luzerne and extreme northern Columbia County.

Southcentral primary range counties are Bedford, Blair, Huntingdon, Fulton, Mifflin, Juniata, Snyder, Perry, western Franklin and northern Cumberland. Increased turkey populations in some southcentral areas now compare with the best northern county densities. Northeast Cambria and southeast Somerset County are adjoining southwestern counties with primary occupied range. There is essentially no range in the southeast section of the state with sustaining turkey flocks.

Unoccupied Turkey Range

All northcentral and most southcentral range is occupied, but significant portions of range in other divisions of the state are still without turkeys. Nearly half of the state's total unoccupied turkey range is in the northeast part of the state (2700 square miles), and the greater forest understory or brush density prevalent in much of the Pocono Plateau may later prove undesirable habitat. However, forest conditions appear acceptable for turkeys in unoccupied range elsewhere in the state.

Considerable research effort has been and is now being expended by the Game Commission to determine factors limiting turkey establishment success on this unoccupied range. Some limiting factors have already been discovered but much remains to be learned. For example, studies are now under way to determine turkey tolerance to brushy forests and to limited range. Conceivably the findings could alter establishment attempts in the Poconos and on some of the isolated range units in the state now considered too small to support turkeys.

Photo by Roy Rumberger

IT IS THE Game Commission's aim to provide turkey hunting on all suitable range in the Commonwealth.

Why, when we already have good self-sustaining turkey populations on two-thirds of our best range, are we so concerned with establishing turkeys on the remainder? Simply because this potential but unoccupied range, by nature of its proximity to Pennsylvania's large urban centers, could furnish as much turkey hunting opportunity as that already provided by the remote northcentral range. In addition, some hunting pressure would desirably be diverted from farms to forest land. Therefore, it is the ultimate aim of the Game Commission to provide turkey hunting, insofar as practical, on all suitable range within easier reach of every hunter in the Commonwealth.

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